

WHAT IS CLAIMED IS:

1. A solution spray apparatus comprising:
at least one nozzle which sprays at least one
a droplet of a solution; and
5 a heater which heats the solution in the nozzle to
a temperature lower than a boiling point of the
solution in the nozzle.
2. An apparatus according to claim 1, wherein the
nozzle sprays an EL solution.
- 10 3. An apparatus according to claim 1, further
comprising:
measurement means for measuring a temperature of
the solution in the nozzle; and
temperature control means for controlling the
15 heater so as to keep the temperature of the solution in
the nozzle constant on the basis of the temperature
measured by the measurement means.
- 20 4. An apparatus according to claim 1, wherein
said at least one nozzle includes a first nozzle which
sprays a solution containing an EL material for
emitting light in a first color, and a second nozzle
which sprays a solution containing an EL material for
emitting light in a color different from the first
color.
- 25 5. An apparatus according to claim 4, wherein the
heater is so controlled to heat as to set the solution
in the first nozzle and the solution in the second

nozzle to different temperatures.

6. A solution spray apparatus comprising:

at least one nozzle which sprays at least one droplet of a solution;

5 a tank which stores the solution and supplies the solution to the nozzle; and

a heat-insulating unit which heat-insulates the solution in the tank.

7. An apparatus according to claim 6, wherein the
10 heat-insulating unit heat-insulates the solution in the tank so as to be lower than a boiling point of the solution in the tank.

8. An apparatus according to claim 6, further comprising:

15 measurement means for measuring a temperature of the solution in the tank; and

temperature control means for controlling the heat-insulating unit so as to keep the temperature of the solution in the tank constant on the basis of the
20 temperature measured by the measurement means.

9. An apparatus according to claim 6, wherein said at least one nozzle includes a first nozzle which sprays a solution containing an EL material for emitting light in a first color, and a second nozzle
25 which sprays a solution containing an EL material for emitting light in a color different from the first color.

10. An apparatus according to claim 9, wherein the heat-insulating unit is controlled to insulate heat so as to set the solution in the first nozzle and the solution in the second nozzle to different
5 temperatures.

11. A solution spray apparatus comprising:
a table which supports a substrate;
at least one nozzle which sprays at least one droplet of a solution onto one surface of the
10 substrate; and

a heat-insulating unit which heat-insulates the table.

12. A solution spray apparatus comprising:
a table which supports a substrate;
15 at least one nozzle which sprays at least one droplet of a solution onto one surface of the substrate; and

a radiator which radiates heat toward a space between the nozzle and the substrate.

20 13. A solution spray apparatus comprising:
at least one nozzle which sprays at least one droplet of a solution onto one surface of a substrate;
a substrate heat-insulating unit which heat-insulates the substrate; and

25 cooling means for cooling the solution in the nozzle.

14. An apparatus according to claim 13, wherein

the cooling means cools the solution in the nozzle to a temperature lower than a heat-insulating temperature of the substrate heat-insulating unit.

15 15. An apparatus according to claim 13, further comprising:

 a temperature detector which detects a temperature of the nozzle; and

 a temperature controller which controls the cooling means so as to make a temperature of the nozzle
10 in the nozzle fall within a predetermined temperature range on the basis of the temperature of the nozzle detected by the temperature detector.

 16. An apparatus according to claim 13, further comprising:

15 a nozzle heat-insulating unit which heat-insulates the solution in the nozzle.

 17. A solution spray apparatus comprising:

 at least one nozzle which sprays at least one droplet of a solution onto one surface of a substrate;
20 and

 circulation means for circulating a medium controlled to a predetermined temperature around the nozzle in order to control the solution in the nozzle to a predetermined temperature.

25 18. A solution spray method of spraying a solution to a predetermined position on a substrate, comprising:
 heating the solution;

supplying the heated solution into a nozzle; and
spraying the solution from the nozzle to the
substrate.

19. A method according to claim 18, wherein a
5 temperature of the solution in the nozzle is lower than
a boiling point of the solution.

20. A method according to claim 18, wherein a
temperature of the solution after spraying from the
nozzle is higher than a temperature in the nozzle.

10 21. A solution spray method of spraying a solution
onto a substrate, comprising:

heating the solution in a nozzle which sprays the
solution, to a temperature lower than a boiling point
of the solution; and

15 spraying the heated solution from the nozzle to
the substrate.

22. A solution spray method of spraying a solution
to a position on a substrate, comprising:

cooling a nozzle which sprays the solution;

20 spraying the solution from the cooled nozzle to
the position of the substrate; and

heating the solution sprayed toward the substrate.

23. A solution spray method of spraying a solution
onto a substrate, comprising:

25 detecting a temperature of a nozzle;

controlling a temperature of the solution in the
nozzle so as to be within a predetermined temperature

range on the basis of the detected temperature of the nozzle; and

spraying the solution controlled within the predetermined temperature range toward the substrate.